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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,062	07/30/2001	Donald J. Schremp	10004377-1	2666

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AGILENT TECHNOLOGIES, INC.  
Legal Department, DL429  
Intellectual Property Administration  
P.O. Box 7599  
Loveland, CO 80537-0599

EXAMINER

PADMANABHAN, KARTIC

ART UNIT PAPER NUMBER

1641

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/919,062

**Applicant(s)**

SCHREMP, DONALD J.

**Examiner**

Kartic Padmanabhan

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 12, 17, 18, 20-24 and 71-98 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12, 17, 18, 20-24 and 71-98 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/8/04 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 5, 12, 20-21, 24, 71-73, 76, 79-80, 84-86, 89-91, and 95 are rejected under 35 U.S.C. 102(b) as being anticipated by Earley et al. (US Pat. 94/08759). The reference discloses a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. The reference also teaches the use of lids with the microtiter plate. Further, the microtiter plate is used to perform DNA sequencing reactions. As such, sample with DNA is loaded into the wells of the plate, such that the bottom surface of the well (support) will comprise or contact DNA molecules.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 3-4, 17-18, 22-23, 74-75, 77-78, 81-83, 87-88, 93-94, and 96-98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Earley et al. (WO 94/08759 A1). The reference teaches a microtiter plate, as previously discussed. However, the reference does not teach the specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to modify the dimensions of the device of Earley et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been

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obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

7. Claims 1-5, 12, 17-18, 20-24, 71-91, and 93-98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pedley (GB 2 197 720 A) in view of Kwasnoski et al. (US Pat. 6,423,948 B1).

Pedley teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. In addition, the reference teaches the immobilization of polynucleotides to the wells of the plate (abstract). However, the reference does not teach the use of a cover, specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

Kwasnoski et al. teach a microtiter plate, wherein the microtiter plate may further comprise a cover.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use the cover of Kwasnoski et al. with the microtiter plate of Pedley because covers are routinely used in the art on microtiter plates to prevent loss of sample or contamination. In addition, it would have also been obvious to modify the dimensions of the modified device of Pedley and Kwasnoski et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re*

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*Rose*, 105 USPQ 237 (CCPA 1955). Further, it would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

8. Claim 1-5, 12, 17-18, 20-24, 71-91, and 93-98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balch (US Pat. 6,083,763) in view of Kwasnoski et al. (US Pat. 6,423,948 B1).

Balch teaches a microtiter plate comprising multiple wells, which, when given their broadest reasonable interpretation, reads on claims drawn to a device with a housing, a support, wells with sloped walls, and a ledge. In addition, the reference teaches that the plate may comprise DNA probes. However, the reference does not teach the use of a cover, specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

Kwasnoski et al. teach a microtiter plate, wherein the microtiter plate may further comprise a cover.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use the cover of Kwasnoski et al. with the microtiter plate of Balch because covers are routinely used in the art on microtiter plates to prevent loss of sample or contamination. In addition, it would have also been obvious to modify the dimensions of the modified device of Balch and Kwasnoski et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design choice, since such a modification would have involved a mere change in the size of components. A

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change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

9. Claims 1-5, 12, 17-18, 20, 22-24, 71-89, and 92-98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. (US Pat. 4,596,723) in view of Kwasnoski et al. (US Pat. 6,423,948 B1).

Kaufman et al. teach an immunoassay, wherein antigen solutions are allowed to stand overnight in wells of polystyrene or polypropylene microtiter plates, permitting adsorption of protein to the well bottom and walls. Thereafter, the antigen solution is poured off, and the wells are filled with noninvolved protein, which cover all the remaining binding sites on the well not already bound by antigen protein. However, the reference does not teach the use of a cover, specific dimensions of the device, such as size (height, length, width, angles) nor does it teach rectangular ledges.

Kwasnoski et al. teach a microtiter plate, wherein the microtiter plate may further comprise a cover.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use the cover of Kwasnoski et al. with the microtiter plate of Kaufman et al. because covers are routinely used in the art on microtiter plates to prevent loss of sample or contamination. In addition, it would have also been obvious to modify the dimensions of the modified device of Kaufman et al. and Kwasnoski et al. to the specific lengths, widths, and angle sizes required by the present claims because it would have been an obvious matter of design

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choice, since such a modification would have involved a mere change in the size of components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). It would have also been obvious to use a rectangular ledge for the plate, as opposed to a circular one, as such a modification is a simple optimization of the assay device and is not thought to change the device in any substantial manner.

### ***Response to Arguments***

10. Applicant's arguments filed 10/8/04 have been fully considered but they are not persuasive to overcome the pending rejections under 35 USC 102 and 103.

11. Applicant first argues that the references only teach a standard ninety-six well microtiter plate, which does not meet the newly added limitation in claim 1 of a wall extending upwardly from a top edge of the well to the top of the housing. This is not found convincing. The references or combination thereof clearly teach a microtiter plate cover, which cover inherently has the structure of a flat surface with walls extending down to the microtiter plate to fit in the grooves of the microtiter plate to create a snug fit. As such, when viewed from the microtiter plate, these walls of the cover extend upward from an area adjacent a top edge of the well to a top portion of the housing, wherein the at least one wall is at least partially sloped in an area thereof adjacent said well (as the plate and cover are interpreted as comprising the housing).

12. Applicant also argues that discovery of a problem is a consideration in determining patentability. While this may indeed be true, it is only one consideration and is in no way dispositive on the issue. Applicant goes on to argue that the holding in *In re Rose* regarding changes in size is not applicable since the present invention involves more than just a change in size. This is not persuasive. In support of this conclusion, applicant has relied on the fact that



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none of the references teach elimination of wicking; however, the examiner maintains that such an explicit disclosure is not necessary as conventional microtiter plates, absent evidence to the contrary, are interpreted as inherently possessing this feature. One does not put liquid in the wells of a microtiter plate with the expectation that the liquid will not remain there; rather, one expects that liquid disposed in the well will stay there, which reduces the difference in applicant's invention over the prior art to a mere change in size of the components. Further, with the use of a cover, loss of sample through evaporation out of the device is minimized. Although the present invention *may* indeed possess various advantages over the prior art and produce unexpected results with regards to elimination or reduction of wicking, as applicant contends, to merit weight, as the examiner has advised on several prior occasions (See Final Rejection mailed 7/2/03), applicant should consider filing a declaration with *actual evidence* outlining the advantages and unexpected results of the present invention over the prior art instead of merely conclusory statements.

13. Although the examiner did acknowledge in the Advisory action the references did not teach a ledge extending from the edge of the well to the at least one wall, this was in error. Upon reconsideration of the references, the examiner believes this feature to be taught by the references. The grooves that are inherently present on the base of a microtiter plate to allow for a cover to fit over the plate are interpreted to meet this feature.

14. The remainder of applicant's arguments seems to rely on the premise that the independent claims are not properly rejected, as applicant simply states that the references do not teach the limitations of the dependent claims without providing any rationale. These arguments are not convincing, as the examiner maintains that the independent claims are properly rejected. While

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applicant is correct in asserting the the *initial* burden is on the examiner to show obviousness, this burden has been met (See Rejections above), and applicant has not met their burden of showing novelty and unobviousness. In the same vein, it is noted that applicant's characterization of "an imagined cover" is clearly erroneous. If the cover is "imagined" as applicant asserts, then how can the references that the examiner has relied upon for this teaching explicitly teach such a cover?

15. With respect to the specific angles claimed in various dependent claims, the examiner maintains that these features do not patentably define the invention over the prior art, as they are mere optimizations of the device and are deemed to have been obvious (See 103 rejections above).

16. Applicant's position that the examiner's interpretation of the the cover as being a part of the housing leads to the conclusion that there is no well is erroneous. Even with this interpretation, there are still wells in the microtiter plate, as the plate is itself called a 96-well microtiter plate.

### ***Conclusion***

Claims 1-5, 12, 17-18, 20-24, 71-98 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kartic Padmanabhan whose telephone number is 571-272-0825.

The examiner can normally be reached on M-F (8:30-5:00).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kartic Padmanabhan  
Patent Examiner  
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11/15/04